

Energetics Strategic Thrust

Investment Plan

DRMB

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EST Approach

Current Capabilities

People

Facilities

Equipment

1.1 M acres/Restricted Airspace

Permits/Explosive Siting

Market Share

Current Business Base

Competition

Needs/Reqs.
Opport. for Future

Desired Future Role(s)

1st Eval./Prioritize

Needed Capabilities

Compare/Prioritize

Investment Plan

Current Capabilities

- Facilities & Equipment
 - » Current Capabilities Document -- published
 - » Based largely on
 - BRAC w/ updates
 - 473 facilities document format, 4B and 52 additions
- People
 - » BRAC data incomplete and outdated
 - » New approach
- Current Business Base
 - » Previous approach -- critical flaw
 - » New approach

Current Business Base

What questions need to be answered?

What % of Center work in Energetics?

How many direct hours in Energetics? % of NAWCWPNS?

How much OH does Energetics consume?

How much in R vs D vs T&E vs Support?

What are the major product lines? How much in each major product line?

Major sponsors/levels for Energetics? each product line?

Who are the people of Energetics?

- Job tile/series

- Educational levels

- Years of experience

- Retirement eligibility

In house/Out house ratio

Current Business Base

Section Heads have much of this information

- Previous approach

- » Heavy reliance on Section heads
- » Briefings last summer--What, why, how
- » Not enough structure in request
- » 200+ entries (instead of 3000+)
- » Hard to do pie charts if data base largely unpopulated

- New approach

- » Heavy reliance on existing data bases
 - NIFMAS, HERBIE
- » Still need Section Heads but quicker, more structured approach

- Preliminary results

Current Business Base

Includes:

- Information from NIFMAS
 - » Sponsor, CON, JON, funding level, PE, expenditure YTD, who charged, etc.
- Information from HERBIE
 - » for those who have charged
 - codes, names, job title, grade, education, DOB, service comp date

Current Business Base

Approach

- 170,000 JONs in NIFMAS
- 23,906 w/ FY 98 charges

How reduce to only those for Energetics

- Make assumptions
- Use current YTD expenditures

Comparisons --all charts that follow are based on experience year to date.

Current Business Base

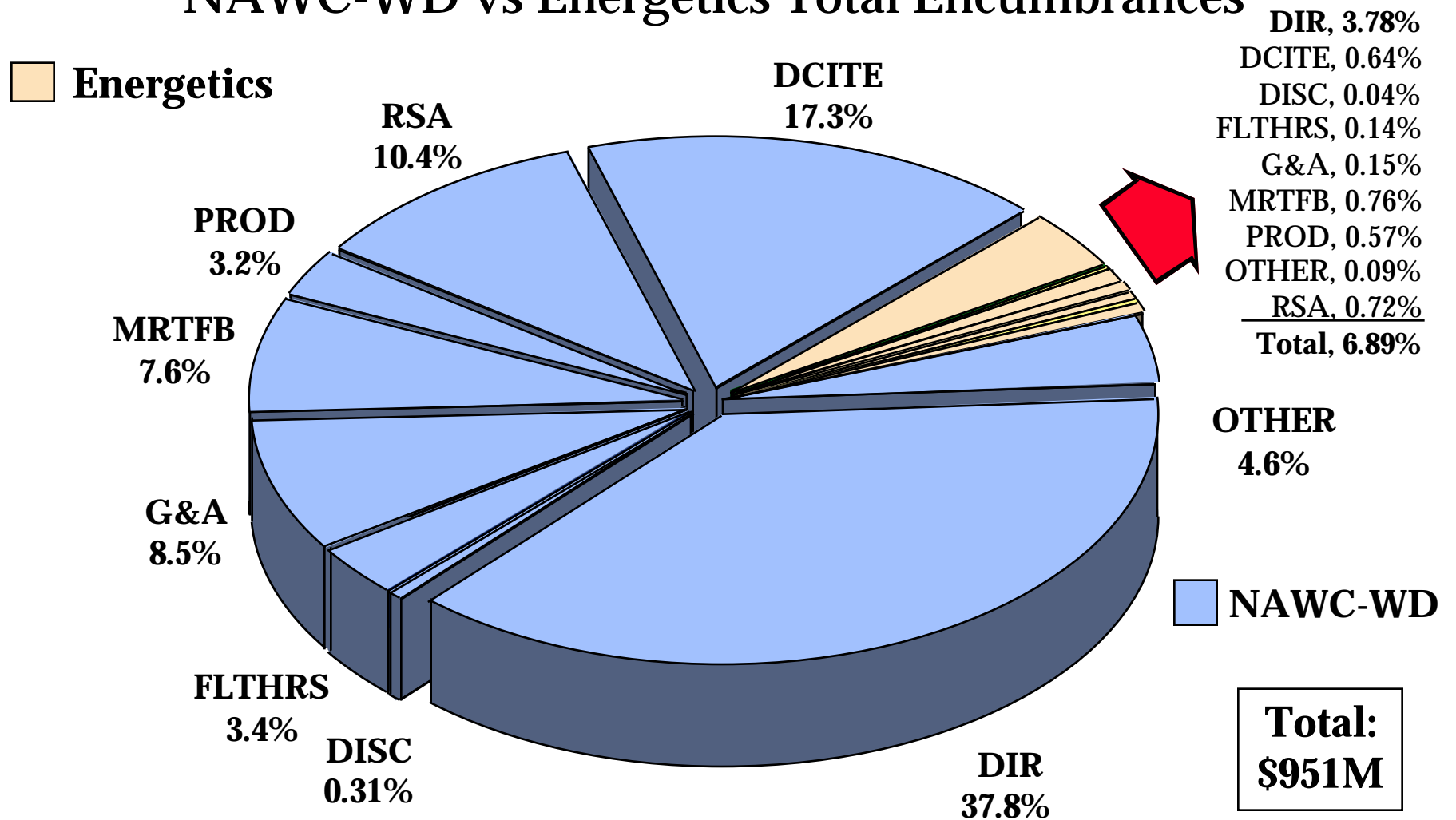
Assumptions Used

- 100% 4B3, 4730, 4732-4, 528, 41J (SS), 88(W)
- 50% 4731, 4735
- 20% 4183 (WSL)
- 15% 4B2, 521-5, 5291-2
- 10% 53 (Targets), 56 (Flt. Ops.)
- 7 people in 4J6
- 4 people in Safety, 9 people in Security

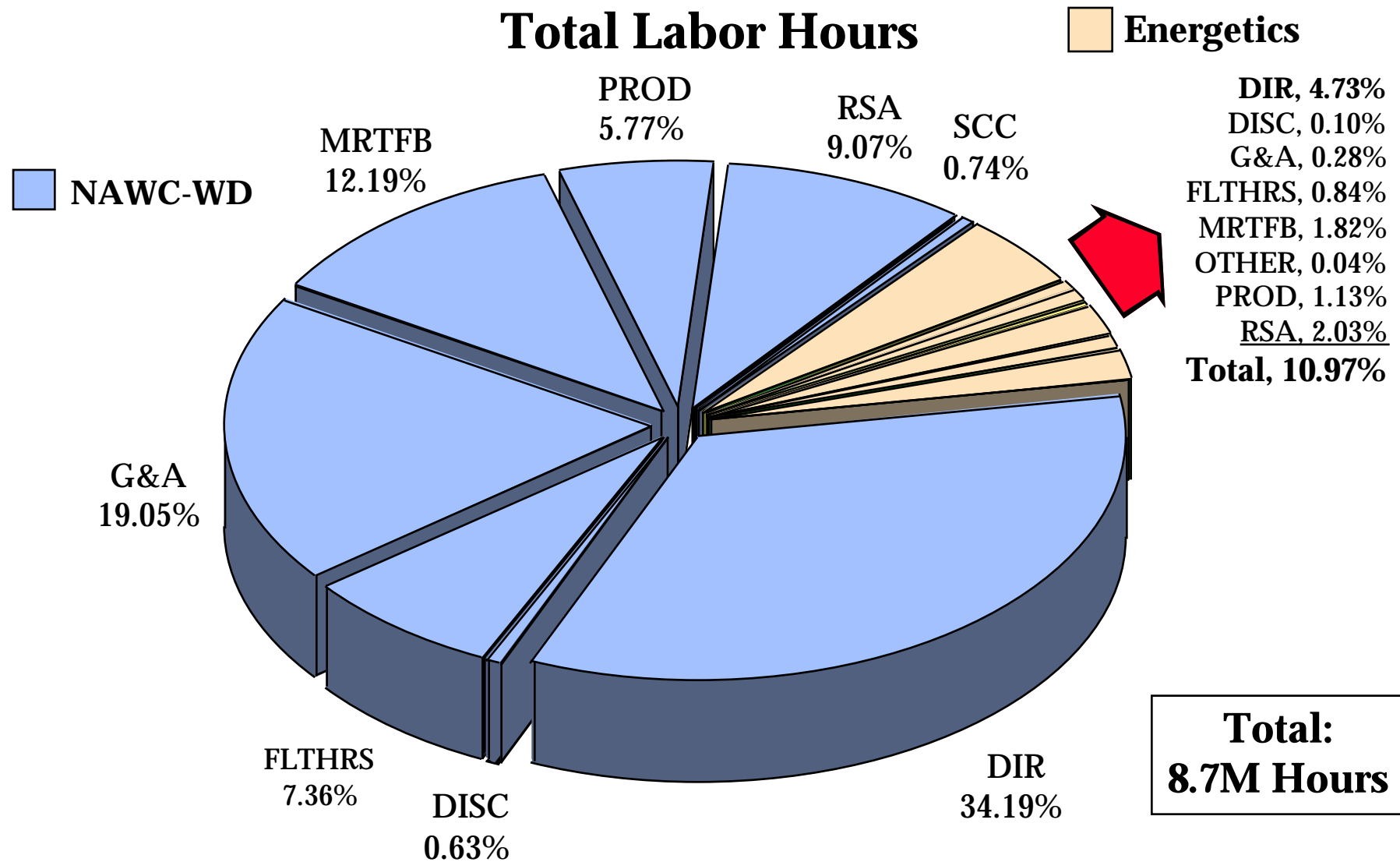
Examples using NIFMAS current year to date expenditures+ assumptions

Preliminary Results

NAWC-WD vs Energetics Total Encumbrances

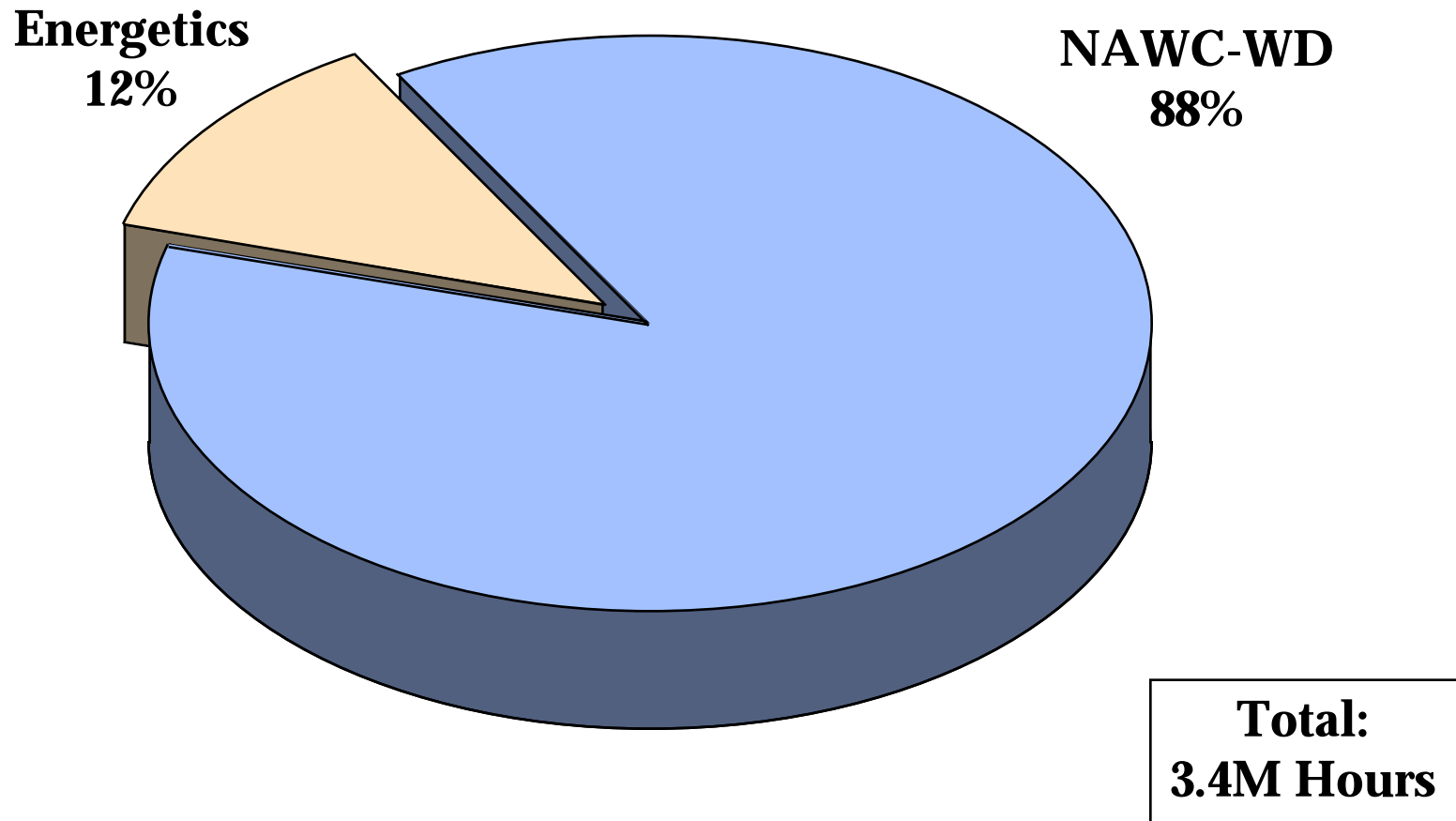


Preliminary Results



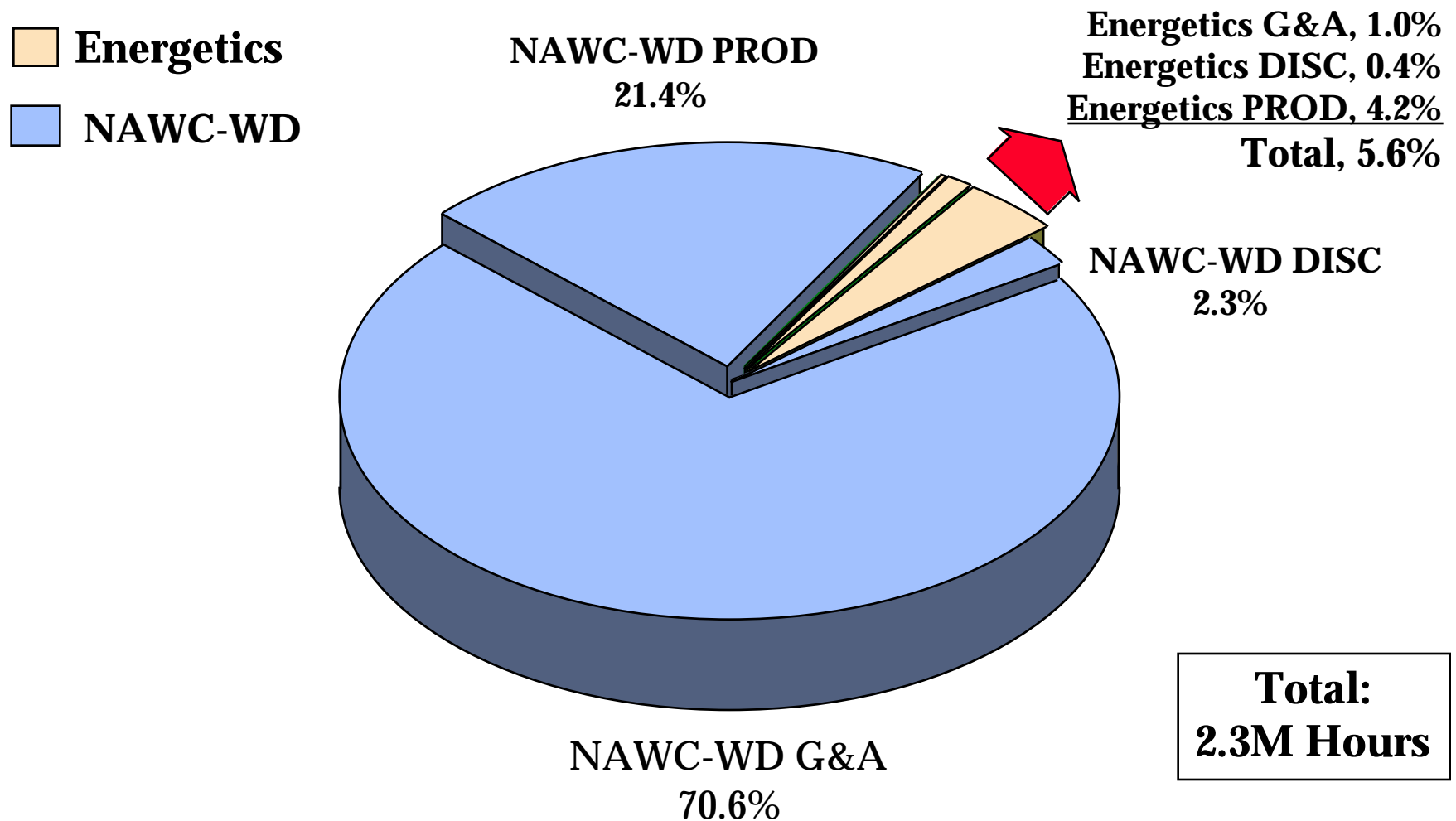
Preliminary Results

Direct Hours



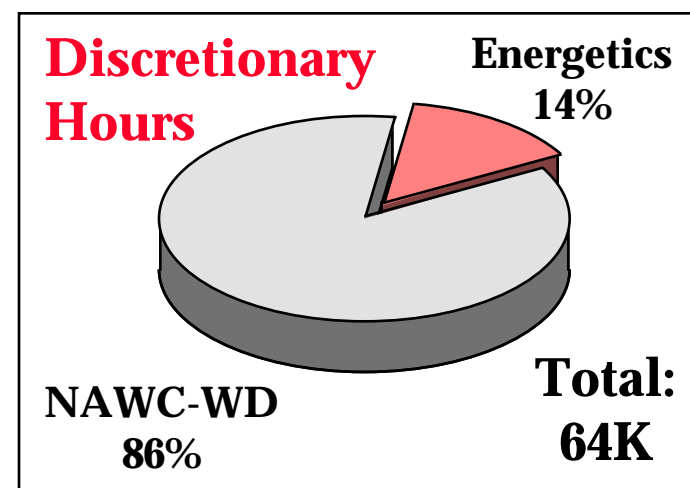
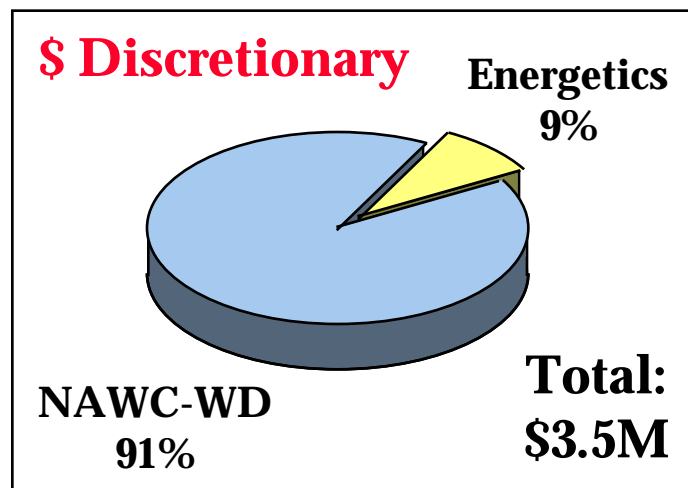
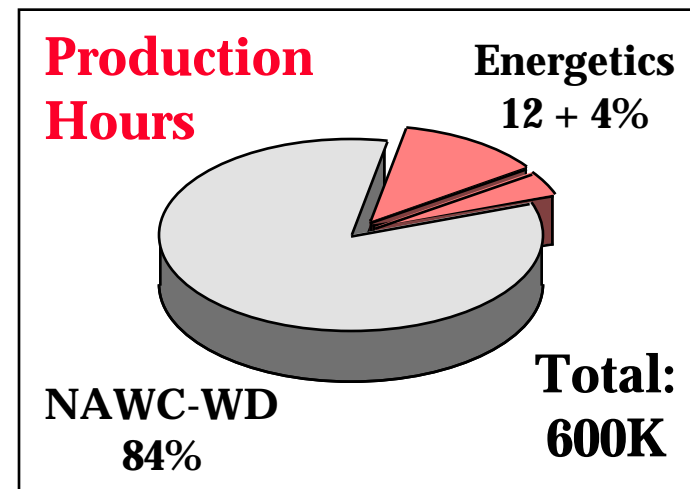
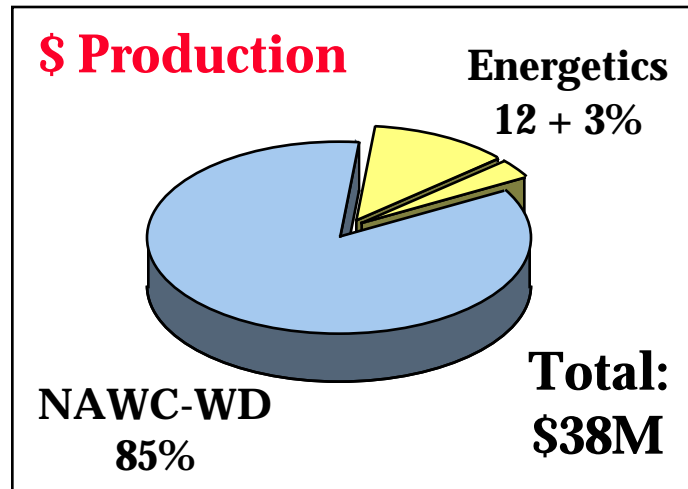
Preliminary Results

Overhead Hours (DISC/ G&A / PROD OH)

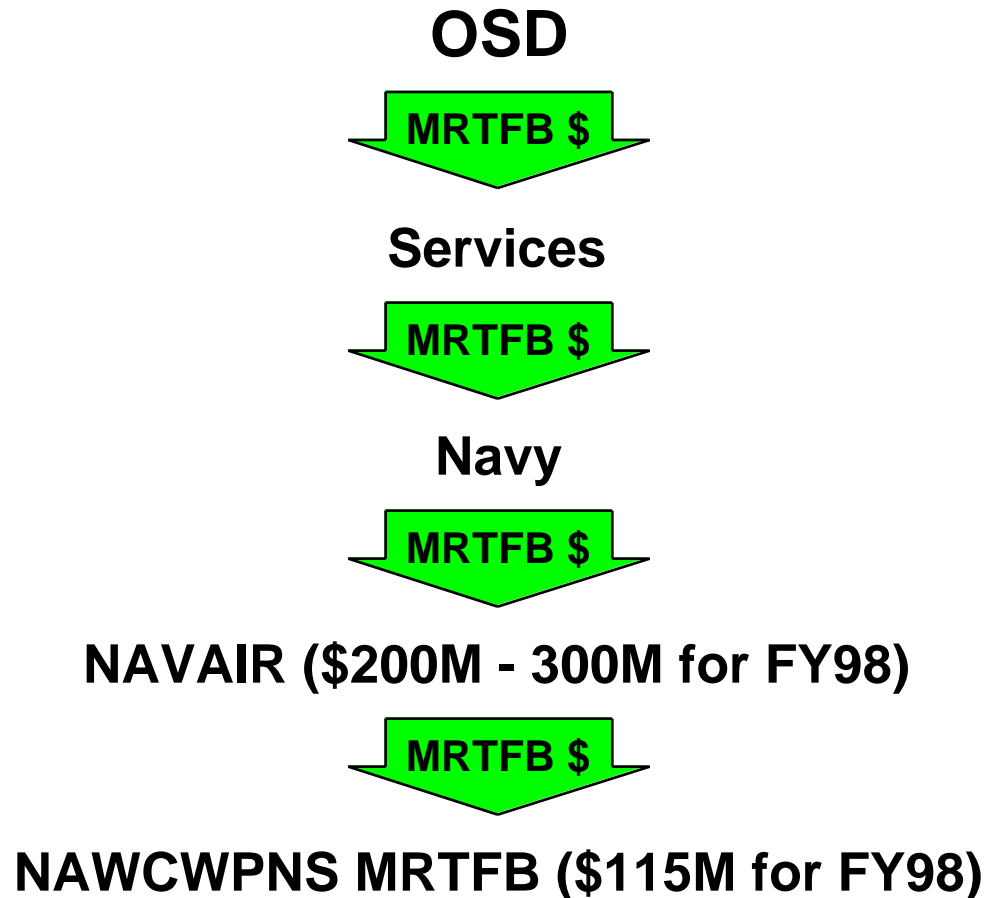


Preliminary Results

Energetics Overhead

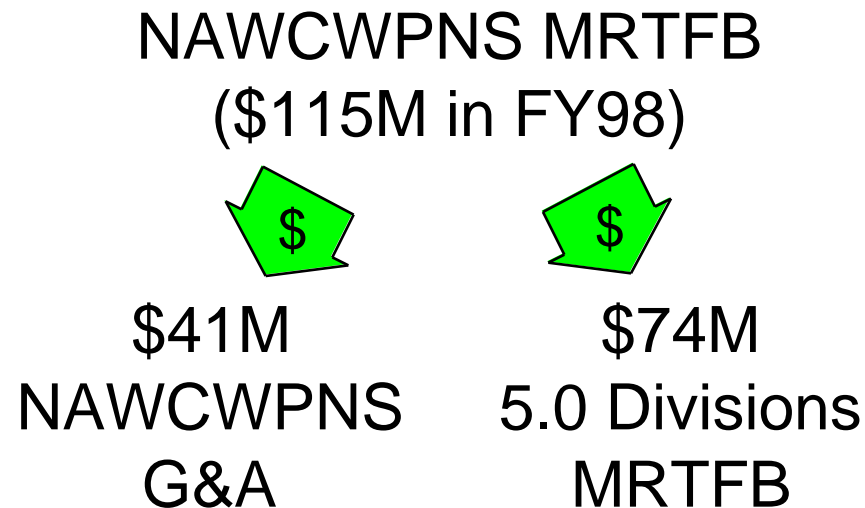


MRTFB Flow Chart



Originally designed to standardize rates across all service ranges, and encourage customers to use the ranges, e.g., reduce start-up costs, maintenance, repair

MRTFB Flow Chart

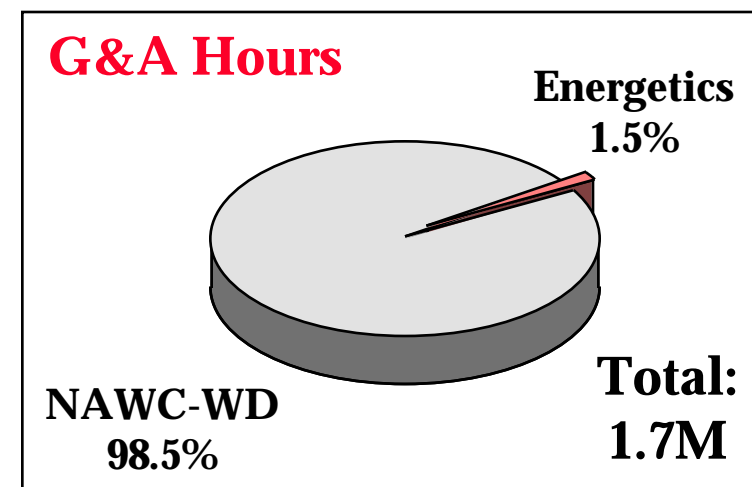
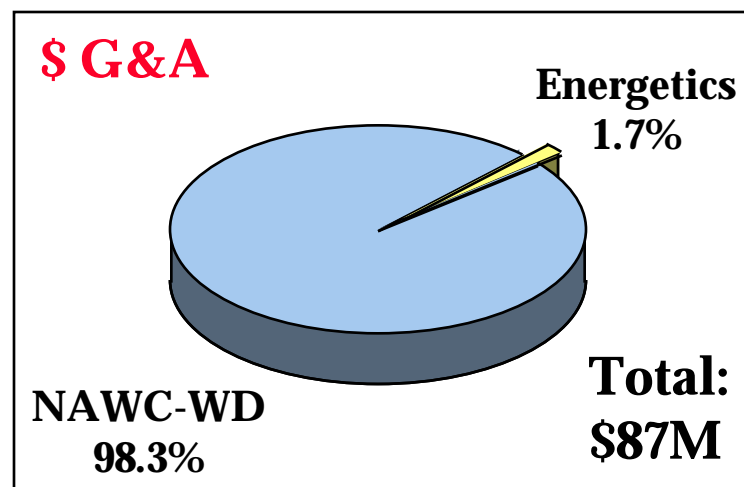
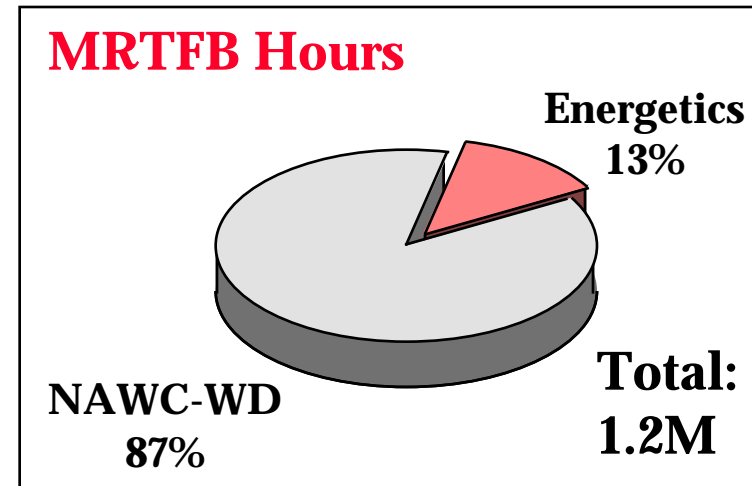
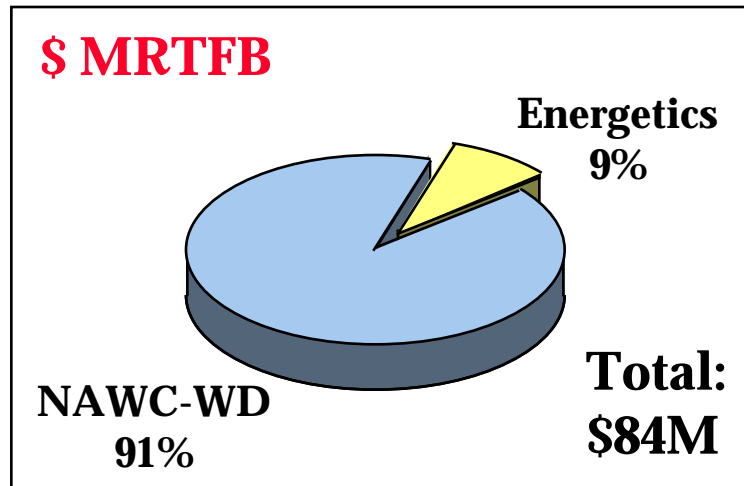


What do 5.0 Divisions use MRTFB for?

- Pays for facilities, part of Division/Branch Heads, Support Staff, transportation, magazines, PW ...
- akin to 4.0 Production Overhead
- Don't get B&P, CPP, Production Overhead, G&A

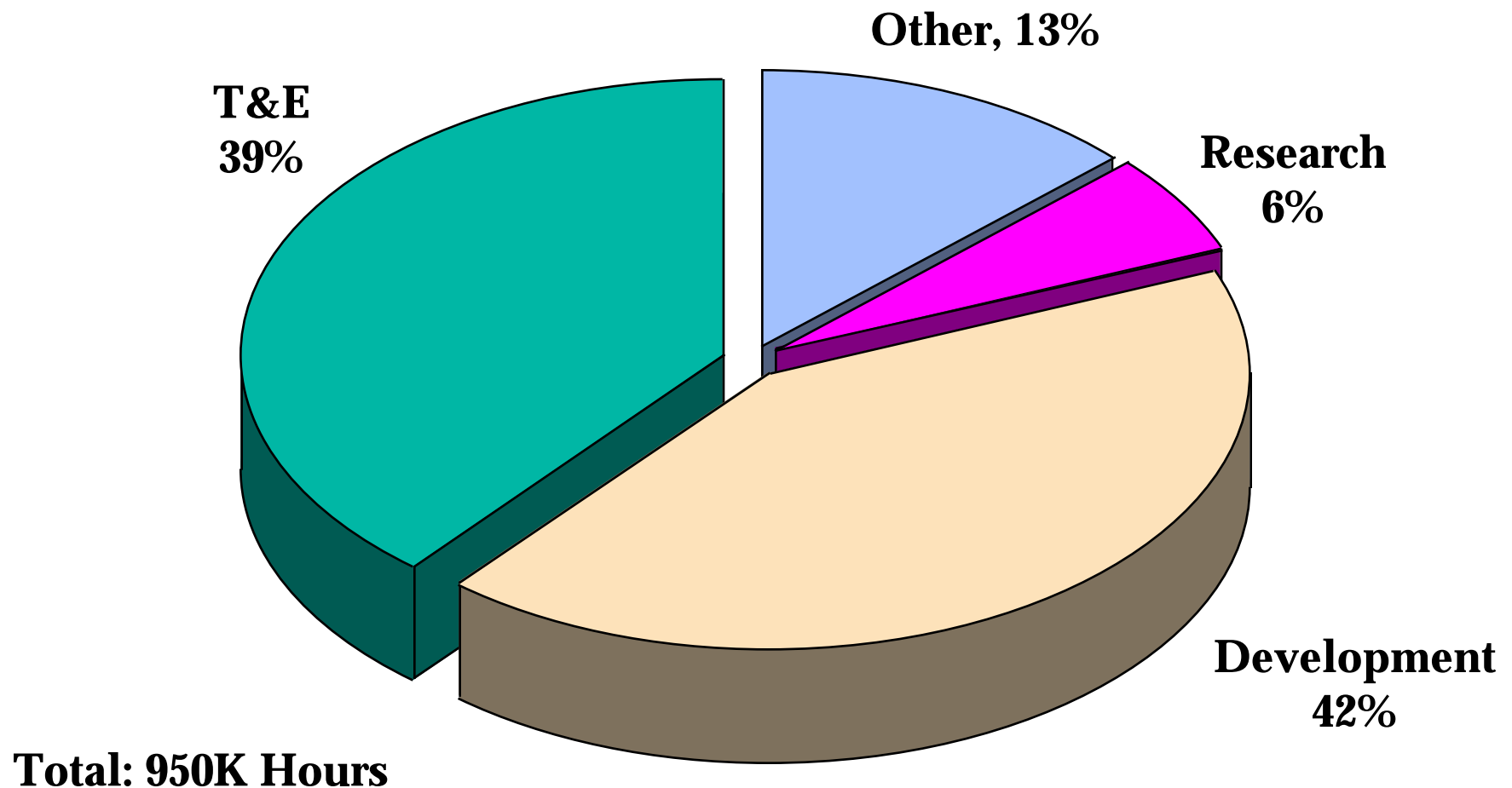
Preliminary Results

Energetics MRTFB and G&A



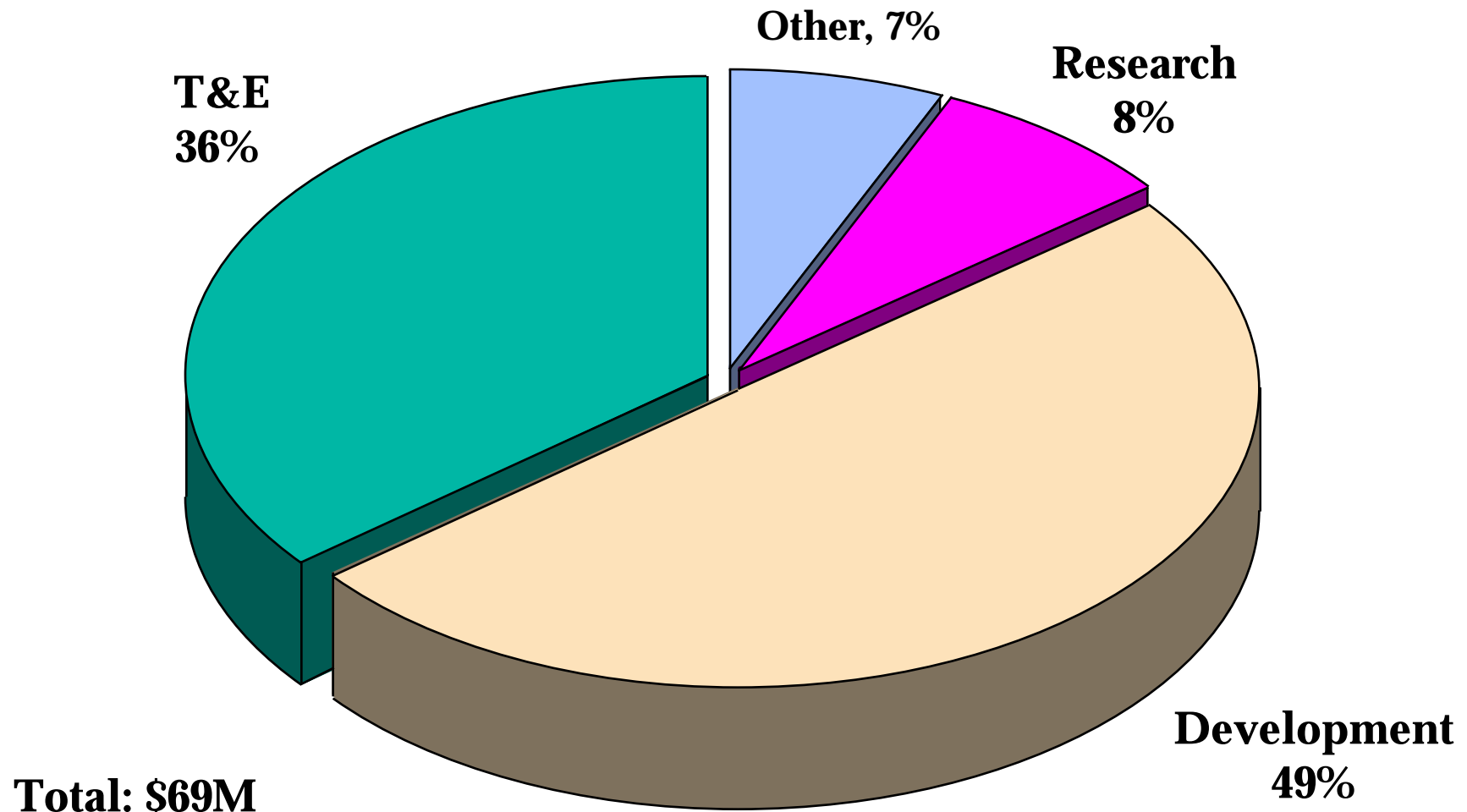
Preliminary Results

NAWC-WD Energetics Hours by Functional Area



Preliminary Results

NAWC-WD Energetics Total Encumbrances by Functional Area



Energetics

Total

- \$66M Encumbrances YTD x 12/8 = \$99M
- 954K hrs Total Labor/1760 = 542 myrs YTD x 1.5 = 813 myrs

Direct

- \$36M Direct YTD x 1.5 = \$53.9M
- 408K hrs Direct/1760 = 231myrs Direct YTD x 1.5 = 348 myrs Direct

Overhead

- \$13.9M OH + MRTFB YTD x 1.5 = \$20.9M
- 129K hrs Overhead/1760 = 73.3myrs OH YTD x 1.5 = 110 myrs OH
- 287K hrs OH + MRTFB/1760 = 163 myrs x 1.5 = 245 myrs.

Return on investment

ROI = Total business/total OH (includes MRTFB) = \$99M/\$20.9M = 4.7:1

ROI = Direct /OH = \$54M/\$20.9M = 2.6:1 w/ MRTFB
= \$54M/\$11.2M = 4.82:1 w/o MRTFB

Energetics

Previous charts--current YTD expenditures + assumptions

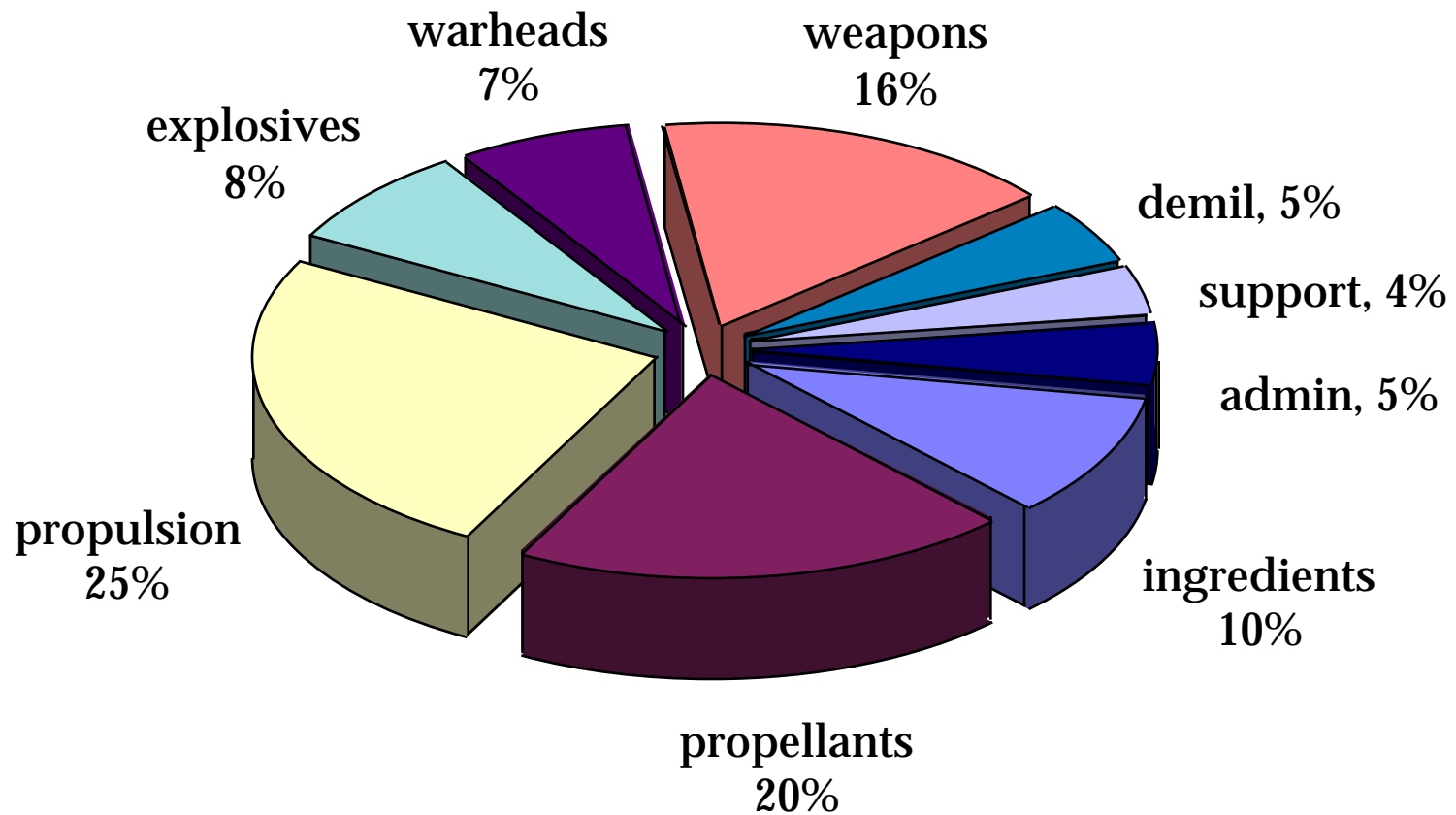
- Energetics vs NAWCWPNS total expenditures
- Energetics vs NAWCWPNS direct
- Energetics vs NAWCWPNS OH

But want more

- Product lines &% in each--Can't do now
- List of sponsors/levels--partial
- People issues--partial

Preliminary Results

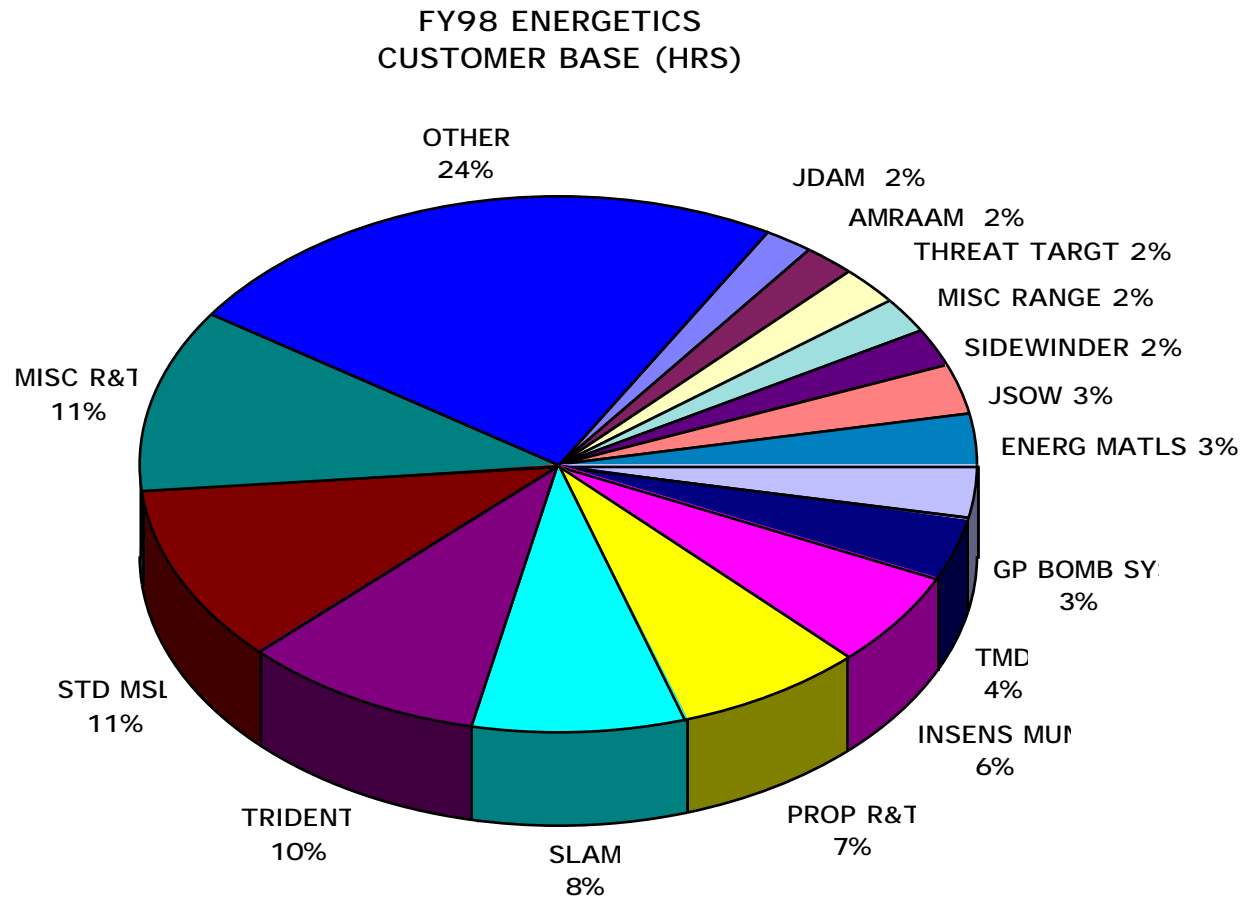
Notional Distribution of Energetics Work



Sponsors/level

- Currently can only do for those codes 100% in Energetics--4B3, 473, 528, and 88
- CONS for these codes from NIFMAS (cog CONs and when people from these codes charging to others CONs)
- Match CONs in DRIPS and get Program titles
- Sort 100% Energetics NIFMAS by Program titles

Sponsors/levels



348K hrs

Personnel

- BRAC data outdated & insufficient
 - » People change faster than facilities and equipment
- Current data
 - » How many people, sorted by
 - job title / series
 - education / training
 - years of service / experience
 - retirement eligibility (DOB, service comp)
 - » Responsibilities of those eligible to retire
 - Bench level S, E & T
 - Principal Investigator
 - Program / Project leader
 - Section Head / Branch Head / Division Head

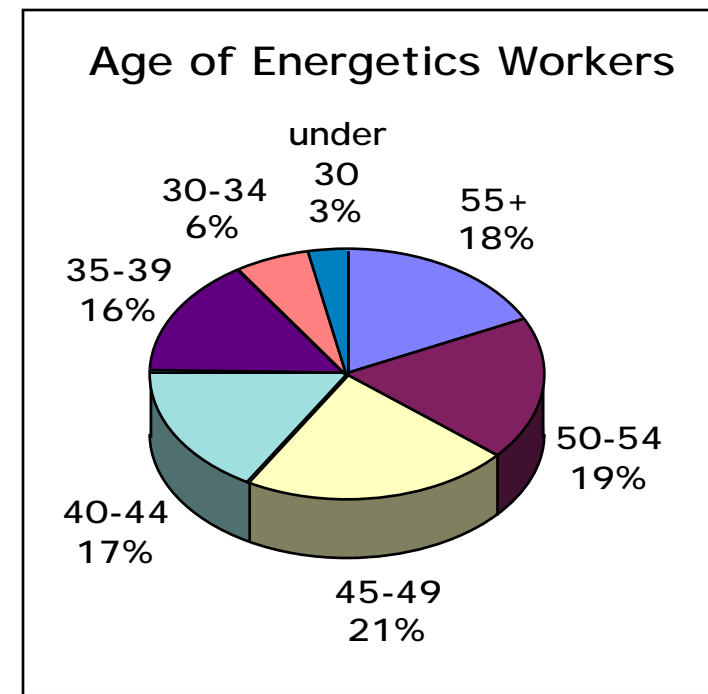
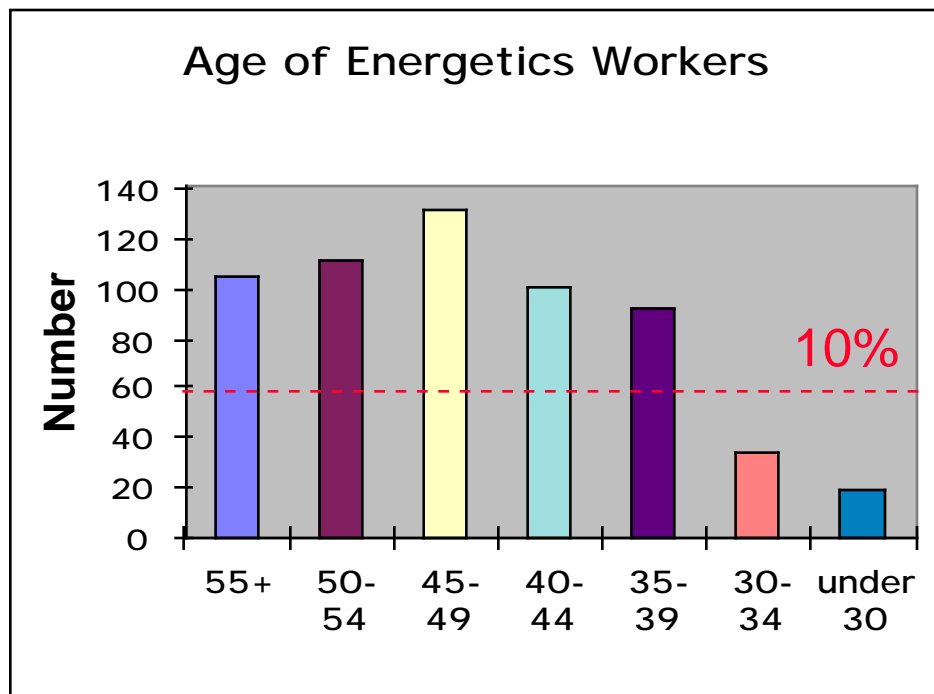
Personnel

Effects of Retirement

- Examined folks who have charged significant amount of time to Energetics JONs in 4B, 473, 528, and 88
- 585 people with 10,900 years experience (avg. = 18.6 yrs.)
- Looked at who is eligible to retire with full benefits now, in 2 yrs, in 5 yrs, and in 10 yrs.

Personnel

Age of Energetics Workforce



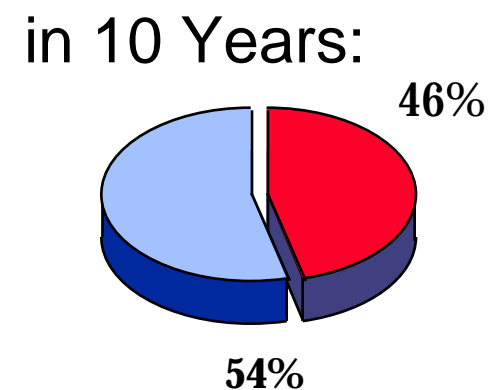
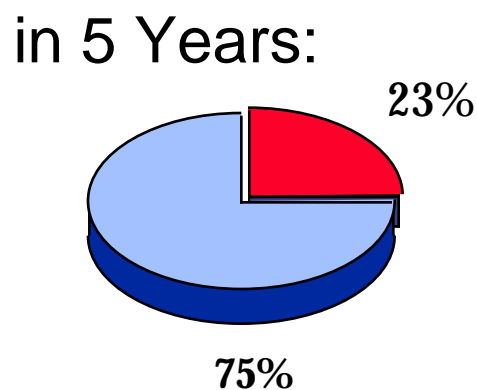
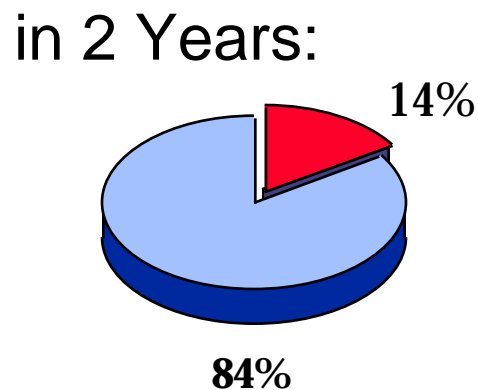
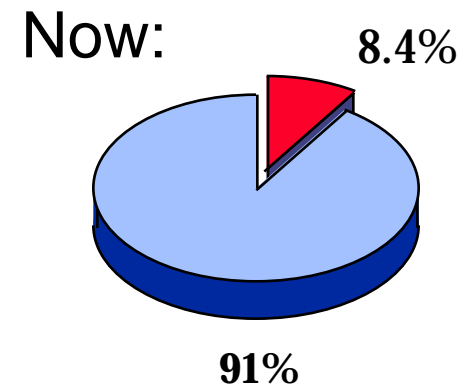
Basis: 585 People

Personnel

Energetics Workers Eligible for Retirement

<u>Age/Exp.</u>	<u>Now</u>	<u>2 yrs.</u>	<u>5 yrs.</u>	<u>10 yrs.</u>
62 / 5	21	26	38	64
60 / 20	11	19	29	60
55 / 30	17	39	69	146
Total	49	84	136	270

Basis: 585 People



Personnel

- The most significant part of the Strategic Plan may not be the facilities and equipment necessary for the future, it will be people.
- At least 8% of Energetics workforce can retire immediately, 23% within 5 years, and 46% within 10 years.
- Must start back filling immediately. You can't hire skilled Energetics personnel directly out of college nor off the street. A significant amount of OJT is required.
- Technician workforce may be super-critical
- Competition

Issues

- Snap shot vs continuing
 - » Snap shot -- costs YTD + assumptions
 - » Balloons -- which going up vs which coming down
 - » Continuing is series of snapshots a la motion picture
- Continuing -- easy to do with 2 “minor” modifications to NIFMAS + input from section heads
 - » energetics code, product line code
 - » no change to JON structure
- Continuing provides tracking -- metrics/vectors
- Level of precision

Issues

“Continuing” Approach--Deficiencies

- Need to automate as much as possible. Everything “starts” with Energetics portion of financial data (even sponsors and people parts). Currently lot of work, assumptions to get to this subset.
 - » 170,000 JONS in NIFMAS, 23,906 w/ FY98 charges
11,749 maybe Energetics----> 4000+ in Energetics
- Still need to rely on Section Heads to “sort” their work into Energetics (Y/N), product lines (7,10)--1-2 hours of funding?
- Based on Expenditures YTD
 - » Early in year problems
 - » Expenditures not linear--how extrapolate?
- Tracks current and past, does not predict future

Implementation of Continuing

- Interim

- » List of JONs, product areas to Section Heads
- » For each JON, Y/N Energetics, what product area
- » Generates more precise Energetics base
- » Sort as indicated in presentation

- Future

- » Modify NIFMAS to accept 2 new columns
- » For each new JON, and all FY99 JONs, section heads enter Business Area (e.g. Energetics) and Product Line
- » Sort and prepare reports